Cal/EPA

Department of Toxic Substances Control

700 Heinz Avenue, Bldg. F, Suite 200 Berkeley, CA 94710

May 13, 1998

Pete Wilson Governor

Secretary for Environmental Protection

Commanding Officer
Engineering Field Activity, West
Attention: Code 18, Mr. Richard Powell (1832)
Naval Facilities Engineering Command
900 Commodore Drive
San Bruno, California 94066-5006

Re: **Parcel C Treatability Study Technical Memorandum, Hunters Point Shipyard, San Francisco, California**

Dear Mr. Powell:

The Department of Toxic Substances Control has reviewed the above-mentioned document. Our comments follow.

Comment #	Comment
1	The purpose and scope of this treatability study are to investigate SVE/AS as a possible solution to the cleanup of contaminated groundwater at Parcel B. The treatibility study should not discuss whether biodegradation and natural attenuation are viable alternatives; any such discussion should appear in the FS accompanied by data of acceptable quality.
2	What is the purpose of comparing induced vacuum with the observed vacuum at a more coarse-grained, more homogeneous subsurface? Where are the results of the comparison? Was field soil gas data, along with total porosity data, used to calibrate the indoor air model? Does it significantly change the model?
3	How does TOC assist in calculating the soil/water partition coefficient (Kd)?
	Is carbon content in soil considered the sole carbon source for the biodegradation process? In other words, is there a linear relationship betwen carbon content in soil and rate of biodegradation? If not, what is the purpose of analyzing TOC?

What is the threshold criterion for total porosity to determine the applicability of SVE?

Please provide a reference for using 1.7E-04 centimeters per second (cm/s) of saturated soil permeability to determine the applicability of Air Sparging.

4 Second paragraph. If an air flow rate of 40 cfm was measured at 48.9 ft circumference, how could the oxygen concentration increase be limited to 10 ft even with air flow rate at 40cfm? This seems to indicate that, between 10ft and 48.9 ft, there is no increase in oxygen concentration or decrease in VOC concentration compared to an air flow of 40 cfm. If that was the intended conclusion, please justify it.

5 Please elaborate on how the author arrived at the conclusion that current groundwater conditions are aerobic. What caused the change in environmental conditions from anaerobic in the past to the present aerobic environment? The decrease in vinyl chloride concentration could be the result of off-gasing and not necessarily that of a biodegradation process.

6 While permeability values were in the 10E-02 cm/s range, the author suggests "they are not applicable for determination of saturated soil permeability given the low moisture content of the sample on which the analysis was performed." What does this say about the pertinence of the sample for the study?

7 Section 2.3.3. Same comments as above. How does the Navy explain the reversal of environmental conditions from anaerobic in the past where vinyl chloride was formed from reductive dechlorination to the present aerobic condition where an electron donor reaction is expected to degrade vinyl chloride?

Please explain the apparent between the increase in vinyl chloride concentrations in groundwater sampling and the absence of a reducing environment as suggested in the fourth paragraph.

If you have any questions about these comments, please contact Mr. Chein Kao at (510) 540-3822 or me at (510) 540-3844.

Sincerely,

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Remedial Project Manager
Office of Military Facilities

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